Public participation in remedial action at the Burlington Northern - Somers Tie Plant site, Somers, Montana.

Prepared for Flathead Lake Protection Association, Lakeside, Montana

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The BN-Somers Site (80 acres) lies within the town of Somers, Montana (pop.1,200, 1980 census) adjoining the northwestern shore of Flathead Lake. Somers, a company town, was founded about 1890 shortly before the Great Northern Railroad reached the valley in 1891. A sawmill and associated tie treating plant were built in 1901. The Tie Treating Plant was operated until 1986.

Design capacity of the plant was approximately 2,950 cross ties per day (10,000 cubic feet of wood). Preservative mixtures including zinc chloride, chromated zinc chloride, and creosote/petroleum were used over the years. Wastewater discharged by the plant was primarily contaminated with zinc chloride or creosote derived compounds (phenolics and polynuclear aromatic hydrocarbons [PAH]). Wastewater was discharged to a lagoon adjacent to the plant that overflowed into an open ditch which discharged into Flathead Lake until 1971. All wastewater discharge was halted in 1984.

Differentiating the applicable environmental programs has been difficult and confusing for the public. The site has multiple jurisdictions: Federal RCRA and CERCLA programs and the Montana Comprehensive Environmental Cleanup and Responsibility Act (CECRA) program. Since Somers is unincorporated, local regulation is also a mixture of overlapping jurisdictions.

Public participation has waxed and waned during the 10+ years that cleanup has been under study. To help with public participation, the Flathead Lake Protection Association applied for, and received, a Technical Assistance Grant December 27, 1988. Due to the potential impact of site remedial activities on the community, FLPA worked with EPA to organize the Somers Coordinating Committee (active local citizens) which meets when necessary but, usually at least quarterly.

One reason public interest has fluctuated has been the long period of time between problem identification and cleanup. Initial site investigations were completed by the Montana Department of Health and Environmental Sciences in 1983. The RI/FS originally planned for completion in 1986 was finally completed in 1989. The first major cleanup activity, soil excavation, was completed in August, 1993, 10 years after initiation of site activities.

Remediation of both soil and groundwater is necessary at this Site. On-site remediation was separated into two efforts on dissimilar time lines. In addition, technical design issues have continually changed throughout the cleanup process. The soil excavation volume changed throughout the process from 11,100 cubic yards in 1992 prior to excavation, to 55,000 cubic yards in 1993 after excavation. Similarly, in 1989, groundwater treatment was estimated to require 15 years, yet in 1992 the treatment period used as

the upper limit for the groundwater treatment design is 50 years.

Actions by the committee and FLPA caused notable changes in the remediation design. Initial off site treatment alternatives were discontinued and only on-site treatment alternatives were considered due to public and committee actions. Proposals to clean up subsurface contaminated beach sediments were changed when it became clear that disturbing the existing beach sediments would likely cause greater contamination of Flathead Lake than was already occurring. Soil incineration alternatives were replaced with biological treatment methods due to the prevalence of inversions and potential air quality problems. The Land Treatment Facility irrigation design was modified by Committee recommendations due to irrigation experience by committee members. Committee meetings facilitated coordination between remediation contractors and the local water district, volunteer fire department, sewer district (community water and sewer systems were constructed during remediation planning and execution) and the school district. The committee was able to bring potential off site contamination issues to the attention of the EPA and owner. The town of Somers constructed two water supply wells adjacent to the site that might be affected by contamination emanating from the site. Through actions by the committee and water and sewer district, a monitoring program was established to protect the Somers water supply. Heavy truck traffic was rerouted to minimize damage to area roads and conflicts with local traffic patterns. To minimize the visual impact on the community by the ongoing cleanup process, vegetative screening was implemented in strategic areas.

The site is, and has been, an integral part of the community. Cleanup methods and time frames have evolved during a long process that has taxed the public's patience and similarly the public's faith in the owner and regulatory agencies. Due to the nature of the contaminants and the contaminated materials, cleanup will be slow though it appears feasible. The TAG has been a beneficial mechanism to obtain public comment, adjust remediation designs to local soil and weather conditions, and address ancillary treatment issues that reduce the impact of the site on local lifestyles.

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The BN-Somers Site, like many sites, represents a mixture of socioeconomic and technical problems. The 80 acre site lies within the town of Somers, MT (pop 1,200, 1980 census)and adjoins the northwestern shore of Flathead Lake. Somers was a company town founded about the time the valley was first developed about 1890. Great Northern Railroad reached the valley in 1891. The sawmill and associated tie treating plant were built in 1901 to utilize the abundant timber resources of the area. The tie treating plant was operated by various owners until 1986. Not surprisingly, residents have strong feelings about the town and mills. The majority of residents in Somers derived their income from either the sawmill or tie treating plant. Due to vagaries of the Superfund process, only the facilities related to tie treating are part of the designated site.

The facility had a design capacity of approximately 2,950 cross ties per day (10,000 cubic feet of wood) which was the principal product. Preservative mixtures including zinc chloride, chromated zinc chloride, and creosote/petroleum were used over the years. Wastewater was discharged by the plant primarily contaminated with zinc chloride or creosote derived compounds (phenolics and polynuclear aromatic hydrocarbons [PAH]). Originally wastewater was discharged to a lagoon adjacent to the plant that overflowed into an open ditch which discharged into Flathead Lake.

The site is complex with multiple jurisdictions, RCRA, CERCLA and CECRA. Since Somers is unincorporated, local regulation is a mixture of overlapping jurisdictions including among other entities: the Board of Flathead County Commissioners, Somers County Water & Sewer District, Somers Volunteer Fire District, and the Flathead City-County Health Department. Public participation has waxed and waned during the over 10 years that cleanup has been under study at this site. To help with public participation, the Flathead Lake Protection Association applied for, and received, a Technical Assistance Grant December 27, 1988. Due to the potential impact of site remedial activities on the community, FLPA worked with EPA to set up the Somers Coordinating Committee. The committee is comprised of active local citizens who generally live within the immediate vicinity of the site. The committee meets as needed, during periods of intense site activity as often as once per month and as infrequently as once every 3 months when review of studies or designs are ongoing.

One of the major problems has been the extremely long period of time between problem identification and cleanup. As a result, the public attention span has been strained and their confidence, in the ability of the parties involved to successfully cleanup the site, has been undermined. Initial site investigations were completed by the Montana Department of Health and Environmental Sciences in 1983. Burlington Northern (BN) commenced studies in 1984. The projected completion date for the RI/FS was January, 1986. Three years later, in 1989, the RI/FS was completed. The Record of Decision

was issued in September, 1989 followed by the Consent Decree on Dec. 20, 1991. In February, 1991, EPA removed the the site from the list of proposed NPL sites. The first major cleanup activities, Swamp excavation, started 10 years after problem identification, April 12, 1993, with completion of all excavation by the end of August, 1993 with approximately 55,000 cubic yards removed.

Another problem has been differentiating the applicable environmental programs in the eye of the public. Three lagoons were constructed under RCRA guidance in 1971 to eliminate the need for the original lagoon. These lagoons were closed under RCRA authority in 1988. The site was proposed for inclusion on the National Priorities List (NPL) by the U.S. Environmental Protection Agency (EPA) in October, 1984 with a different public participation agenda than under RCRA. An Administrative Order for Immediate Removal was issued by EPA in May, 1985, for emergency excavation of contaminated soils in the swamp located adjacent to Flathead Lake. In May, 1988, approximately 40 cubic yards of contaminated beach sediments were removed at the request of EPA.

In addition to dealing with dramatic changes in time lines, both report completion dates and cleanup periods, technical design issues have continually changed throughout the cleanup process. The soil remediation volume changed throughout the process, in 1989 the estimated contaminated soil volume was 11,100 cubic yards, in 1992, 31,000 and in 1993 the estimated total excavated soil volume was 55,000 cubic yards. Similarly, in 1989, groundwater treatment was estimated to require 15 years, yet in 1992 the treatment period used as the upper limit for the groundwater treatment design is 50 years.

Typical of many sites, remediation of both soil and groundwater is necessary at the Somers Site. Therefore, on-site remediation was separated into two efforts on dissimilar time lines. Treatment of contaminated soil was addressed first and has the shorter time line. Remedial Design investigations commenced in May, 1991 with the Preliminary Design Report Soil Remedy submittal in May, 1992. The Somers Soil Remedy Soil Excavation Prefinal Remedial Design Report was submitted December, 1992 with preliminary soil excavation completed in September and October, 1992. Construction of the Land Treatment Facility (LTF) commenced in October, 1992. The LTF was completed in March, 1993.

Groundwater treatment is being addressed separately and on a much longer time line. The Prefinal Report Groundwater Remedial Action was submitted March, 1993, with the final report expected in October, 1993. The upper design limit for groundwater remediation is 50 years. Due to site complexities, groundwater treatment will be phased with Phase I being a field scale trial run to determine design parameters that work on this site and Phase II being implementation of the refined design. Phase I is expected to take a least one year. Installation of Phase I wells was completed in the fall of 1993.

Actions by the committee and FLPA caused notable changes in the remediation design. Off site treatment was unfavorably received by the public, particularly the proposed recipients of the contaminated materials. In response to public concern, Somers citizens worked with the proposed recipients to alter the Somers remediation plan such than only on-site treatment alternatives were considered. Then, proposals to clean up subsurface contaminated beach sediments were changed when it became clear that disturbing the existing beach sediments would likely cause greater contamination of Flathead Lake than was already occurring. Soil incineration alternatives were replaced with biological treatment methods due to the prevalence of inversions and potential air quality problems. The Land Treatment Facility irrigation design was modified by Committee rec-

ommendations due to extensive irrigation experience in the vicinity of the site by committee members. Committee meetings facilitated coordination between remediation contractors and the local water district, volunteer fire department, sewer district (community water and sewer systems were constructed during remediation planning and execution) and the school district. The coordinating committee also was able to bring potential off site contamination issues to the attention of the EPA and owner. The town of Somers constructed two water supply wells adjacent to the site that might be affected by contamination emanating from the site. Through actions by the committee and water and sewer district, a monitoring program was established to protect the Somers water supply. Heavy truck traffic was rerouted to minimize damage to area roads and conflicts with local traffic patterns. To minimize the visual impact on the community by the ongoing cleanup process, vegetative screening was implemented in strategic areas.

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